

TAYLOR
Appl. No. 10/510,604
October 8, 2004

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REMARKS/ARGUMENTS

Reconsideration of this application is requested. Claims 47, 48, 51-63, 66-72 and 75-77 are in the case.

I. SPECIFICATION

The title has been changed to adopt the proposal suggested by the Examiner. In addition, a new Abstract is presented on a separate sheet attached hereto. No new matter is entered.

II. THE OBVIOUSNESS REJECTION

Claims 47-50 and 60 stand rejected under 35 U.S.C. 103(a) as allegedly unpatentable U.S. patent 2139943 to Fenske et al. Claims 61-70 stand rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Fenske in view of U.S. patent 3,446,729 to Jewell et al. Those rejections are respectfully traversed.

As claimed, the invention provides a method for improving the thermal oxidative stability of a jet fuel. The method comprises selectively reducing the active concentration in the fuel of N-H containing heterocyclic aromatic compounds in which the nitrogen atom of the N-H group is part of the aromatic system, by treatment with a suitable adsorbent material comprising a compound having a benzaldehyde functionality supported on a suitable support. The fuel also contains an active concentration of metal compounds or will be exposed to active metal compounds in storage or in use.

TAYLOR
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Claim 47 as amended has been arrived at by incorporating the subject matter of claims 49 and 50. Claims 49 and 50 have accordingly been canceled without prejudice. Claim 47 also recites "oxidative" consistent with the new title. New claim 77 is supported by the disclosure at page 7, lines 20-22. No new matter is entered.

The Action asserts that Fenske relates to a process for extracting from crude petroleum or products thereof materials considered to be deleterious. The process of Fenske involves extraction with a solvent in the presence of an adsorbent (see for example page 1 lines 49 - 55). However, as noted in the Action, Fenske fails to disclose many of the features of the presently claimed invention. In fact, Fenske fails to disclose or suggest at least: jet fuel, N-H containing heterocyclic aromatic compounds, active concentration of metal compounds, and an adsorbent comprising a compound having a benzaldehyde functionality supported on a suitable support.

Absent any suggestion of the combination of features now claimed, Fenske fails to give rise to a *prima facie* case of obviousness. Any assertion that Fenske suggests the invention as now claimed necessarily involves the application of hindsight, which is clearly not permitted.

Claim 47, as noted above, has been amended to incorporate the features of claims 49 and 50. With regard to claims 49 and 50, the Action suggests that benzaldehyde may be selected from the very large and diverse range of solvents listed in Fenske at page 3 column 2, lines 57 to page 4 column 1, line 2. In response, such a selection is not justified on the basis of the document as a whole, especially since (as Fenske explains) the support and the solvent are performing independent functions (see page 3, column 2, lines 21 to 39). Thus, the adsorbent and solvent pick up materials to

TAYLOR

Appl. No. 10/510,604

October 8, 2004

different extents. For these reasons at least, Fenske does not suggest the present invention. Withdrawal of the rejection of claims 47-57 and 60 based on Fenske is respectfully requested.

Claims 61 to 70 relate to the identified group of N-H compounds which are preferably removed in the present invention. As admitted in the Action, Fenske makes no mention of nitrogen compounds. Jewell relates to a refinery process in which basic nitrogen compounds are extracted with phosphoric acid (see, claim 1, step (d)). This is completely unrelated to Fenske and is also unrelated to the presently claimed invention in which the active concentration in the fuel of N-H containing heterocyclic aromatic compounds in which the nitrogen atom of the N-H group is part of the aromatic system is selectively reduced by treatment with a suitable adsorbent material comprising a compound having a benzaldehyde functionality supported on a suitable support. Not only would there be no motivation to one of ordinary skill to combine Fenske and Jewell, even if this combination was attempted by one of ordinary skill (it is believe this would not have occurred), the presently claimed invention would not have resulted or have been rendered obvious thereby because Fenske makes no mention of nitrogen compounds and, in the Jewell process, basic nitrogen compounds are extracted with phosphoric acid. Withdrawal of the outstanding obviousness rejections is respectfully requested.

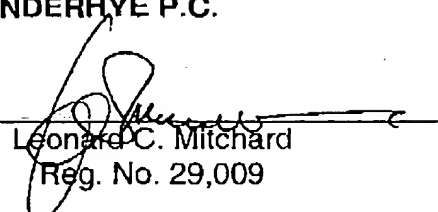
Favorable action is awaited.

TAYLOR
Appl. No. 10/510,604
October 8, 2004

Respectfully submitted,

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